

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 September 2003 (25.09.2003)

PCT

(10) International Publication Number  
**WO 2003/079169 A3**

(51) International Patent Classification<sup>7</sup>: G06F 3/02, 1/16

(21) International Application Number:  
PCT/GB2003/001038

(22) International Filing Date: 11 March 2003 (11.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0205716.4 12 March 2002 (12.03.2002) GB

(71) Applicant (for all designated States except US): ELEK-  
SEN LIMITED [GB/GB]; Charter Court, Midland Road,  
Hemel Hempstead, Hertfordshire HP2 5GE (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CHAPMAN,  
Christopher [GB/GB]; 2 Spring Lane, Watlington, Oxon  
OX9 5QL (GB). SANDBACH, David, Lee [GB/GB]; Flat  
C, 9 Westbourne Road, London N7 8AR (GB). WALK-  
INGTON, Stuart [GB/GB]; 72A Westfields, St Albans,  
Hertfordshire AL3 4LZ (GB). FITZGERALD, Timothy,  
Charles, Andrew [GB/GB]; Fairbourne, 28 The Rise,  
Sevenoaks, Kent TN13 1RQ (GB).

(74) Agent: ATKINSON, Ralph; Atkinson Burrington, 25-29  
President Buildings, President Way, Sheffield S4 7UR  
(GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,  
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
UZ, VC, VN, YU, ZA, ZM, ZW.

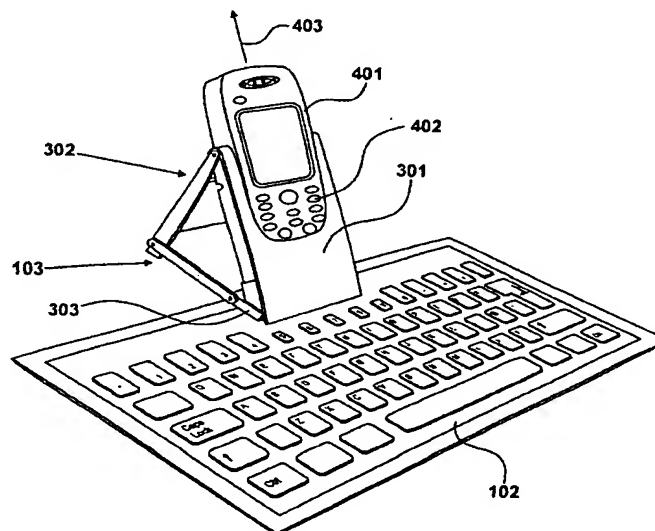
(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted  
a patent (Rule 4.17(ii)) for the following designations AE,  
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,

[Continued on next page]

(54) Title: FLEXIBLE FOLDABLE KEYBOARD



(57) Abstract: A flexible foldable keyboard apparatus comprising a flexible foldable keyboard (101) having a key defining plane (102), an interface device and phone supporting means (103). The phone supporting means (103) is arranged to unfold from a storage configuration, in which the phone supporting means (103) is folded onto the key defining plane (102) to allow the key defining plane (102) to be wrapped around the phone supporting means (103), to present a telephone supporting configuration, in which the phone supporting means (103) is configured to receive a mobile telephone (401). The phone supporting means (103) is configured to support a mobile telephone (401) in an orientation in which an electrical connection is provided between said interface device and the electrical connectors of said mobile telephone (401), such that said mobile telephone (401) and said flexible foldable keyboard (101) are in electrical communication.



CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

17 June 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

# INTERNATIONAL SEARCH REPORT

Int'l Application No  
PCT/GB 03/01038

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 G06F3/02 G06F1/16

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G06F H01H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 01/75572 A (ELECTROTEXTILES COMPANY LTD ;SANDBACH DAVID LEE (GB); WALKINGTON S) 11 October 2001 (2001-10-11) page 2, line 1 - line 23 page 6, line 12 - line 25 page 9, line 18 -page 11, line 22 page 12, line 15 - line 26 page 14, line 17 -page 15, line 17 page 19, line 20 -page 21, line 12 page 43, line 12 -page 44, line 26 figures 2-7,9-11,18-32</p> <p style="text-align: center;">-/-</p>	1-16

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

8 April 2004

Date of mailing of the international search report

26/04/2004

Name and mailing address of the ISA:  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Butler, M

# INTERNATIONAL SEARCH REPORT

Int'l Application No  
PCT/GB 03/01038

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/60438 A (THINK OUTSIDE) 12 October 2000 (2000-10-12) page 9, line 23 - line 26 page 14, line 10 - line 27 page 19, line 10 - line 29 page 24, line 4 -page 26, line 8 figures 1-7,16-20 -----	1-16
A	WO 99/21077 A (GATEWAY 2000 INC) 29 April 1999 (1999-04-29) page 2, line 4 - line 30 page 5, line 3 - line 30 page 6, line 23 -page 8, line 5 page 9, line 5 - line 15 page 12, line 18 -page 13, line 14 page 14, line 3 - line 8 figures 2,3 -----	1,2,8,9, 12-15
A	WO 01/59975 A (CANESTA INC) 16 August 2001 (2001-08-16) page 12, line 30 -page 13, line 11 page 15, line 6 - line 12 figures 1,2 -----	1,2,7,8
A	WO 01/44910 A (VANN CHARLES) 21 June 2001 (2001-06-21) page 4, line 15 -page 5, line 37 figures 1-5 -----	1,4,8

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Intl. Patent Application No

PCT/GB 03/01038

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0175572	A	11-10-2001	AU 4263101 A	15-10-2001
			AU 4263301 A	15-10-2001
			AU 4264001 A	15-10-2001
			AU 4264101 A	15-10-2001
			AU 4434001 A	15-10-2001
			CN 1423769 T	11-06-2003
			CN 1437756 T	20-08-2003
			EP 1269501 A1	02-01-2003
			EP 1269302 A2	02-01-2003
			EP 1269298 A2	02-01-2003
			EP 1269502 A1	02-01-2003
			EP 1269503 A1	02-01-2003
			WO 0175922 A1	11-10-2001
			WO 0175575 A2	11-10-2001
			WO 0175923 A1	11-10-2001
			WO 0175572 A2	11-10-2001
			WO 0175924 A1	11-10-2001
			GB 2365532 A ,B	20-02-2002
			GB 2365533 A ,B	20-02-2002
			GB 2365132 A ,B	13-02-2002
			GB 2365133 A ,B	13-02-2002
			GB 2365134 A	13-02-2002
			JP 2003529837 T	07-10-2003
			JP 2003529838 T	07-10-2003
			US 2003011576 A1	16-01-2003
			US 2002162732 A1	07-11-2002
			US 2003146902 A1	07-08-2003
			US 2002134116 A1	26-09-2002
			US 2002135457 A1	26-09-2002
			AU 5857301 A	26-11-2001
			EP 1282852 A1	12-02-2003
			WO 0188683 A1	22-11-2001
			GB 2367134 A ,B	27-03-2002
			US 2002134828 A1	26-09-2002
WO 0060438	A	12-10-2000	AU 4184100 A	23-10-2000
			CA 2369080 A1	12-10-2000
			EP 1188105 A2	20-03-2002
			US 2002084920 A1	04-07-2002
			US 2002050934 A1	02-05-2002
			WO 0060438 A2	12-10-2000
WO 9921077	A	29-04-1999	AU 1088099 A	10-05-1999
			WO 9921077 A1	29-04-1999
WO 0159975	A	16-08-2001	US 6614422 B1	02-09-2003
			AU 6181801 A	20-08-2001
			CN 1439151 T	27-08-2003
			EP 1332488 A2	06-08-2003
			JP 2004500657 T	08-01-2004
			WO 0159975 A2	16-08-2001
			US 2003063775 A1	03-04-2003
			US 2003132921 A1	17-07-2003
			US 2003174125 A1	18-09-2003
			US 2004046744 A1	11-03-2004
			US 6512838 B1	28-01-2003
			US 6522395 B1	18-02-2003
			US 2002021287 A1	21-02-2002

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Application No

PCT/GB 03/01038

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0144910	A	21-06-2001	US 6168331 B1	02-01-2001
			AU 1765901 A	25-06-2001
			EP 1238326 A2	11-09-2002
			WO 0144910 A2	21-06-2001